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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,074	09/22/1999	AMIT VERMA	4449	4152

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EXAMINER

RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 05/07/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/401,074

Applicant(s)

VERMA ET AL. 

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- ☒ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 3/12/2003 contains copies of documents that are difficult to read due to the fact that the ink of the copies came off on other pages leaving images from one page on another page. Examiner suggests that Applicant resubmit the copies with ink that is less prone to smearing.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tellado et al (USPN 6,424,681) in view of Derks et al (USPN 6,021,119).
3. Regarding claim 9, Tellado discloses sampling the symbols to be transmitted of the frame (col. 5, lines 15-24); comparing the magnitudes of the samples to a threshold to determine if the samples violate the threshold (col. 6, lines 54-56) where if samples are to be corrected to within a threshold it is obvious that the samples would be tested to determine if the sample exceeded the threshold; determining an upper limit correction value for each symbol (col. 6, lines 50-58) where the upper limit of the correction value is the value needed to negate the frame's peak to below the threshold; computing a peak reduction kernel (col. 7, line 59-col. 8, line 47) responsive to the upper limit correction values further comprises determining a phase component and an amplitude component of the upper limit correction values, and setting the phase

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component of the upper limit correction values to zero to ensure that the peak reduction kernel has its peak value at the first sample of the frame (Tellado: col. 5, lines 47-51) where the phase of the peak reduction frequencies which have their magnitude set by the upper limit correction value (vector *c*) can be initialized to zero which effectively sets the phase component of the upper limit correction value to zero since the upper limit correction value is the value for the peak reduction frequency; responsive to determining a sample magnitude does violate the predetermined threshold, applying the kernel to the sample to reduce the peak (col. 7, line 59-col. 8, line 2 and col. 8, lines 43-47); and transmitting the modified symbol (col. 2, lines 56-62).

Tellado does not disclose that the method's correction values control the amount of signal to noise ratio deterioration because Tellado's method is designed such that it does not affect the signal to noise ratio. However, Tellado does recognize that the correction values will affect the signal to noise ratio unless measures are taken to design around this problem (col. 2, lines 42-47). Thus it would have been obvious to ensure that the correction values are set such that SNR is not increased to the point that communication is not possible. Tellado possibly does not disclose that the threshold is selectable and the correction value is selectable. Derks discloses having selectable thresholds for a system in order to allow a user to be able to control the operation of a system according to the user's preferences (col. 11, lines 29-43). Thus it would have been obvious to one of ordinary skill in the art to have the threshold and the correction value be selectable in order to allow the system user to tailor the system to the user's preferences.

4. Regarding claim 10, referring to claim 9, Tellado in view of Derks discloses rotating the kernel to ensure that the peak of the kernel coincides with the peak of the frame (Tellado: col. 8, lines 45-47); determining whether or not the peak of the kernel has a sign equal to the sign of the

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frame's peak (Tellado: col. 7, lines 54-61 and col. 8, lines 43-59 esp. lines 48-50); if the signs are equal then the kernel is multiplied by minus one (Tellado: col. 7, lines 54-61 and col. 8, lines 43-59 esp. lines 48-50); and adding the peak of the kernel to the samples to reduce the peak of the frame (Tellado: col. 7, lines 1-9 and lines 54-61).

5. Regarding claim 11, referring to claim 9, Tellado in view of Derks discloses applying the peak kernel to the sample where the kernel has a magnitude scaled to the extent that the frame's magnitude exceeds the threshold (Tellado: col. 8, lines 43-59 esp. lines 50-55).

6. Regarding claim 12, referring to claim 11, Tellado in view of Derks discloses that the magnitude of each kernel is equal to one and that the sum of the magnitudes of the kernels equals the number of corrections values (Tellado: col. 8, lines 32-34 and col. 10, lines 21-22). Tellado in view of Derks possibly does not expressly disclose that the scaling factors are chosen to ensure a sum of the magnitudes of the kernels applied is equal to one. However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Tellado in view of Derks discloses that the sum of the magnitudes of the kernels equals a number, any value for the sum would have been obvious absent a showing of criticality by Applicant.

***Allowable Subject Matter***

7. Claims 1-7 are allowed. Regarding claim 1, the examiner did not find support in the prior art for having a net penalty function determined with a gradient being computed from this net penalty function.

***Response to Amendment***

8. The indicated allowability of claims 9 and 12 is withdrawn in view of the newly discovered passages in Tellado et al (USPN 6,424,681).

9. Applicant's arguments with respect to claims 7-12 have been considered but are moot in view of the different application of the grounds of rejection.

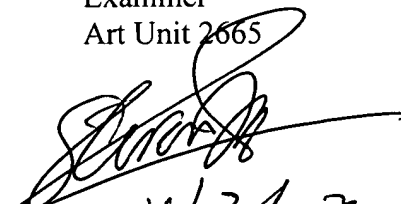
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6743 for regular communications and (703)308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman  
Examiner  
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Daniel J. Ryman *DJR*  
April 28, 2003